

REMARKS

A response to the initial Office Action was due on November 18, 2004. A Request for a Three-Month Extension of Time and the associated fee are attached. Accordingly, this response is timely filed.

Reconsideration of this application, as amended, is respectfully requested. By this Amendment, several informalities in the specification have been corrected, claim 1 has been amended to more particularly point out and distinctly claim the subject invention, and new claims 7-10 have been added to further define the invention. The addition of "new matter" has been scrupulously avoided. Claims 1-10 remain in this case.

In the initial Office Action, applicant's claim for foreign priority was acknowledged, but it was noted that a certified copy of the two priority applications had not yet been submitted. The certified copies required to perfect the priority claim will be timely filed.

The Examiner's correction of the typographical error on the Information Disclosure Statement is acknowledged with thanks.

The original drawings were objected to because they did not include reference number (10) cited on page 7, line 17 of the original specification and because reference character "7" was inadvertently used to designate both the foot and the rigid arm in the specification.

In response to this objection, Applicant is removing reference character "(10)" from page 7, line 17 of the specification and replacing reference character "(7)" on page 7, line 25 with "(17)". It is believed that these amendments to the specification eliminate the need for any further drawing corrections.

Claims 1-5 stand rejected under 35 U.S.C. 103(a) as allegedly obvious over Raidel (U.S. Patent 4,541,653) in view of McKenzie et al. (2001/0008333), and claim 6 stands rejected on the same grounds further in view of Vandenberg (U.S. Patent 5,690,353). These rejections to the extent that they are considered applicable to the claims as now presented, are respectfully, but most strenuously traversed.

Independent claim 1 has been amended to highlight two distinctive features of the present invention, namely that:

1. The pair of links are capable of absorbing transverse loads so as to substantially eliminate transverse movements of the axle during vertical motions of the axle without resort to a transverse link between a side member and the axle; and
2. The transverse rod of the anti-roll bar is mounted between a bottom extremity of each lower link at an articulation point of the lower link with the rigid arm.

These features are conspicuously absent from the primary reference and, in fact, the teaching of the primary reference is antithetical to these features.

As stated in the original specification, one of the goals of the present invention is to ensure correct lateral guidance of the axle by eliminating as much as possible the transverse movements of the axle during its vertical motions. See page 3, lines 4-8, page 9, lines 7-14 and page 10, lines 10-12 of applicant's specification.

This is accomplished by providing a pair of mutually articulated links which "act like two shackles of relatively great width.

This configuration is capable of absorbing transverse loads. The suspension therefore has no transverse link which, as we have seen previously, would cause a kinematic linkage prejudicial to road holding. The flexing of the flexible parallelogram therefor occurs in one and the same substantially vertical plane, with no risk of having the axle move transversally." (Page 5, lines 17-28 of the original specification.)

More particularly, and with reference to Figure 1 of the present application, in the present invention, "(D)ue to the width of the upper link (26) and the lower link (22), transverse loads are taken at the pins (25, 27, 32) through which the upper link (26) and lower link (22) pivot mutually and relative both to the side members (3, 4) and to the rigid arms (7). Hence excellent transverse guidance is obtained which improves the vehicle's road holding." (Column 9, lines 7-14 of the original specification.)

In contrast, prior art suspension systems that employ a transverse link between the side member and the axle suffer from the "disadvantage of producing a poor kinematic linkage, because the transverse link moves in a circular arc during the vertical motions of the axle. The movement of this transverse link therefore induces transverse movements of the axle which adversely affect road holding." (Page 2, line 34-page 3, line 2 of the original specification.)

Raidel discloses an air spring suspension which includes a cross radius rod 44 (See Fig. 3 of this reference) which acts as a transverse link. The Raidel suspension suffers from the drawbacks associated with such a transverse link as described above. There is no teaching or suggestion in this reference of employing a pair of links for absorbing the transverse loads without resort to such a transverse link.

Further, the suspension of the present invention includes an anti-roll bar which is basically U-shaped. As stated at page 8, line 33-page 9, line 4 of the original specification,

This anti-roll bar (36) comprises a cross bar (37) mounted between the bottom extremities of the lower links (22). This cross bar (37) is mounted colinearly with the pin (25) enabling the pivoting of the lower links (22) relative to the rigid arm (7). This cross bar (37) is supplemented by two lateral branches (38, 39), the free ends of which (40, 41) are in turn attached at the level of the pivot pins (27) of the upper link (26) and lower link (22).

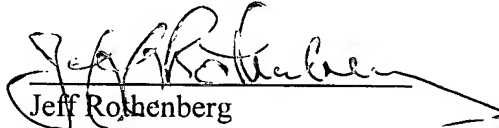
In contrast, in Raidel, the anti-roll bar (48) is integral with the lower link and extends in an opposite way, i.e. between upper extremities of the lower link. Even if the anti-roll bar (48) was separated from the lower link, as suggested by the Examiner, the cross bar would still not be located between the bottom extremities of the lower links as now claimed.

Neither of the other applied references overcome these basic deficiencies of the primary reference.

Accordingly, all of the claims in this application are now believed to be in condition for allowance, and such action is respectfully requested.

If it would advance the prosecution of this application, the Examiner is invited to contact Applicant's representative at the below indicated telephone number.

Respectfully submitted,

  
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